



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,040	09/18/2003	Warren Lin	26571-502	4471

7590
Michael I. Kroll
171 Stillwell Lane
Syosset, NY 11791

02/03/2006

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,040

Applicant(s)

LIN, WARREN

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The amendment filed 11/21/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: new paragraph inserted on pg. 6 after line 24 results in the introduction of new matter when the phrase "reinforcing ribs 118 which are limited to the width of these braking surfaces" is interpreted as the reinforcing ribs 118 (particularly the heights of elements 118) which are limited to the width of these braking surfaces. Clarification such that the language in the specification exactly corresponds to the illustration in figure 1C will overcome the objection.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

2. Claims 1-4 and 6-21 are objected to because of the following informalities: the phrase "an inner diameter" in line 9 of claim 1 should be changed to --the inner diameter-- and the phrase "one said first and second the annular braking surface" in line 9 of claim 1 should be reworded. Also it is unclear as to which words are deleted and kept in line 4 from the bottom of claim 14 possibly because of scanning resolution. Please provide clarification as to how the phrase in line 4 from the bottom of claim 14

Art Unit: 3683

should read. The remaining claims are objected to due to their dependency from claim 1 or 14. Appropriate correction is required.

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Applicant has indicated that claims 23-29 are cancelled yet provides text for claims 23-25. Examiner has interpreted the phrase to mean "26-29. (canceled)". Clarification is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 18. The phrase "plurality of openings positioned in the bridge" is indefinite in light of the recitation in claim 14 that the bridge is formed of a solid radially extending wall. It is unclear to the Examiner whether the bridge is intended to be solid or not. Clarification is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6-12, and 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4263992 to Moore et al.

Re: claims 1, 8, 10, and 22. Moore et al. show in figures 1 and 2 a brake rotor shown in the area of element 22 comprising a central mounting portion 18 for mounting the brake rotor on a hub, the mounting portion having an annular wall having outer surfaces parallel to a central axis of the central mounting hub as shown, a first annular braking surface bottom 22 and a second annular braking surface bottom 24 (or first annular braking surface top 22 and second annular braking surface bottom 22 in an alternate interpretation), wherein each braking surface includes an inner diameter and an outer diameter, a bridge 42,46,48 (portion 48 for claim 22) in the form of a solid radially extending wall completely surrounding the central mounting portion between the central mounting portion and an inner diameter of one of the first and the second annular braking surfaces, and a plurality of ribs 52 mounted on the bridge between an inner diameter and the annular wall wherein the central mounting portion, the braking surfaces, the bridge, and the ribs are formed in (or connected together to create) a single piece. The spaced openings in claim 22 are represented by elements 50.

Re: claim 2. Moore et al. show in figure 2 the limitation wherein at least a portion of at least one rib 52 protrudes above a surface of the bridge.

Re: claim 3. Moore et al. show in figures 1 and 2 wherein the bridge reinforcing ribs 52 extend into a space (radially) between the first annular braking surface (or portions of which positioned at 12 o'clock on the rotor) and second annular braking surface (or portions of which positioned at 6 o'clock on the rotor).

Re: claims 4, 6, 7, and 9. Moore et al. show in figures 1 and 2 wherein the bridge ribs 52 extend between brake surface ribs 26a located between the first and second annular braking surfaces in the alternate interpretation of braking surfaces (the bridge ribs extend radially between the brake surface ribs located at 12 o'clock and the brake surface ribs located at 6 o'clock on the rotor), the brake surface reinforcing ribs extending between inner and outer diameters of the first and second annular braking surfaces as shown. With regards to claim 7, the pairs of openings are the spaces between elements 26a. With regards to claim 9, one of the openings is a first opening and one of the openings is a vent.

Re: claims 11, 19, and 23. In the alternate interpretation one of elements 13 is a cover for covering all or a portion of the bridge, particularly radially outer portions of portion 44 of the bridge. In the first interpretation the cover is represented by element 20.

Re: claims 12 and 24. In the alternate interpretation the cover, for example, bottom element 13 comprises a circular piece of material having a central opening corresponding in size to the central mounting portion of the rotor. (Examiner notes that

the annular space within the annular cover includes a plurality of concentric openings, one of which corresponds to the size of the central mounting portion of the rotor.) The central opening receives the central mounting portion of the rotor when the bottom element 13 is slipped over the central mounting portion for subsequent attachment to the portion of the rotor having the braking surfaces, as broadly recited.

Re: claim 14. Moore et al. show in figures 1 and 2 a brake rotor shown in the area of element 22 comprising a central mounting portion 18 for mounting the brake rotor on a hub, a first annular braking surface or top 22 and a second annular braking surface or bottom 22, wherein each braking surface includes an inner diameter and an outer diameter, a plurality of flow channels provided between the braking surfaces or the spaces between elements 26a, a bridge in the form of a solid radially extending wall completely surrounding and perpendicular to an outer surface of the central mounting portion extending between the central mounting portion and the inner diameter of at least one of the first and the annular braking surfaces, a plurality of ribs positioned on the bridge wherein the central mounting portion, the braking surfaces, the bridge, and the ribs are formed in a single piece as explained with respect to the rejection of claim 1.

Re: claim 15. Moore et al. show in figure 2 the limitation wherein each flow channel includes at least one wall 26a.

Re: claims 16, 17, and 18. Moore et al. show in figure 3 in a third interpretation the limitation wherein the at least one wall 26b comprises one of the plurality of ribs in which the bridge 44 in the form of a solid radially extending wall completely surrounding

Art Unit: 3683

and perpendicular to an outer surface of the central mounting portion and an inner diameter of one of the first and second brake surfaces and a plurality of radially extending ribs 26b positioned on the bridge as shown in figure 3. With regards to claim 18, some of the openings are flow channels and some of the openings are plurality of openings.

Re: claim 18. The openings may also be considered, alternatively, as elements 50 in a bridge 48 in Moore et al.

8. Claims 1-3, 6-9, 11-15, 17, 19, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4913266 to Russell et al.

Re: claims 1-3, 6-9, 14, 15, and 17. Russell et al. show in figure 2 a brake rotor comprising a central mounting portion 1 for mounting the brake rotor on a hub, a first annular braking surface 5 and a second annular braking surface to the left of the lead line of 3, wherein each braking surface includes an inner diameter and an outer diameter, a plurality of flow channels provided between the braking surfaces or the spaces between elements 7, a bridge in the form of a solid radially extending wall or rightmost annular wall surface of the element to the left of the lead arrow of number 15 completely surrounding and perpendicular to an outer surface of the central mounting portion extending between the central mounting portion and the inner diameter of at least one of the first and the annular braking surfaces since it slides over element 1 and connects to element 9 which is between 1 and the inner diameters of the braking surfaces, a plurality of ribs 25 positioned on the bridge via a cylindrical section connecting the ribs to the annular bridge wherein the central mounting portion, the

Art Unit: 3683

braking surfaces, the bridge, and the ribs are formed in a single piece as shown in figure 1 using a similar explanation as that set forth with respect to the rejection of claim 1 in view of Moore et al.

Re: claims 11, 12, 19 and 20. Russell et al. show in figure 2 a cover or element to the right of the lead arrow of element 15 for covering all or a portion of the bridge (at least the outermost edge of the bridge as shown in figure 1).

Re: claims 13 and 21. Russell et al. show in figure 2 wherein the cover includes a plurality of fastening openings 27 for receiving fasteners.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore et al. in view of JP-3333.

Moore et al. describe the invention substantially as set forth above, but lack the limitation of the cover including a plurality of fastening openings for receiving fasteners for fastening the cover to the rotor.

JP-3333 teaches in figure 1 the use of a cover 12 including a plurality of fastening openings 12b for fastening the cover to the rotor 13.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the connection of the cover to the rotor of Moore

et al. to have included holes for fasteners, as taught by JP-3333, to provide a functionally equivalent means of securing one component of the rotor (cover) to another (the braking surface component) to ensure proper performance of the wheel/brake assembly.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Although Russell et al. has been used again in the new rejections, the rejections are based on a new interpretation of the reference.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

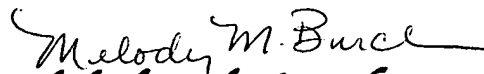
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mmb
January 31, 2006


Melody M. Burch
Primary Examiner
Art Unit 3683
1/31/06